CLAIMS

1. A printing plate, comprising:

a substrate; and

a hydrophilic porous layer formed on a surface of said substrate.

2. A printing plate according to claim 1, wherein said porous layer includes a large number of small pits, and an average diameter of said small pits and a thickness of said porous layer are adapted to allow imaging resin to be deposited thereon with a required bonding strength and to be given with a required thickness.

3. A printing plate according to claim 2, wherein the thickness of said porous layer is no less than five times the average diameter of said pits.

4. A printing plate according to claim 1, wherein said porous layer includes a large number of small pits having an average diameter substantially smaller than a dot that is to be formed by imaging resin deposited on a surface of said porous layer.

5. A printing plate according to claim 1, wherein said porous layer includes a large number of small pits having an average diameter substantially no more than one tenth of a dot that is to be formed by imaging resin deposited on a surface of said porous layer.

6. A printing plate according to claim 1, wherein said porous layer includes a large number of small pits having an average diameter substantially smaller than an

average diameter of particles of printing oil ink.

7. A printing plate according to claim 1, wherein said porous layer includes a large number of small pits having an average diameter of 0.03 μm to 1 μm.

8. A printing plate according to claim 7, wherein said pits of said porous layer have an average depth of 5 μm to 10 μm.

9. A printing plate according to claim 1, wherein said substrate comprises an aluminum base plate.

10. A printing plate according to claim 9, wherein said porous layer consists of an anodized layer, said anodized layer being 0.1 μm or more in thickness.

11. A printing plate according to claim 9, wherein said hydrophilic porous layer comprises an electrochemically etched layer.

12. A printing plate according to claim 1, wherein said substrate comprises a plastic film, and an aluminum film laminated on a surface thereof.

13. A printing plate according to claim 12, wherein said porous layer consists of an anodized layer, said anodized layer being 0.1 μm or more in thickness.

14. A printing plate according to claim 12, wherein said hydrophilic porous layer comprises an electrochemically etched layer.

15. A printing plate according to claim 10 or 13, wherein said small pits are arranged at a density of 10×10^6 to 100×10^6 /mm^2.

16. A printing plate according to claim 11 or 14, wherein said small pits are arranged at a density in the order of 1×10^6 /mm^2.

17. A printing plate according to claim 1, wherein said pits extend substantially perpendicularly to a major plane of said printing plate.

18. A printing plate according to claim 1, further comprising a hydrophilic coating formed over the surface of said porous layer.

19. A method for making a printing plate, comprising the steps of:

preparing a blank printing plate including a substrate and a hydrophilic porous layer formed on a surface of said substrate;

applying imaging resin in a substantially liquid form on selected parts of the surface of said porous layer; and

curing said imaging resin applied to said porous layer.

20. A method for making a printing plate according to claim 19, wherein said imaging resin is applied by using an ink jet recording head.

21. A method for making a printing plate according to claim 20, wherein said porous layer includes a large number of small pits having an average diameter

substantially smaller than a dot formed by said imaging resin expelled from said ink jet recording head.

22. A method for making a printing plate according to claim 19, wherein said imaging resin comprises ultraviolet curing resin, and said curing step comprises a step of radiating ultraviolet energy onto said imaging resin.

23. A method for making a printing plate according to claim 19, wherein said imaging resin comprises thermosetting resin, and said curing step comprises a step of applying heat to said imaging resin.

24. A method for making a printing plate according to claim 19, wherein said imaging resin is lipophilic.

25. A method for making a printing plate according to claim 19, wherein said imaging resin in liquid form has a viscosity in the range of 5cp to 30 cp at room temperature.

26. A method for making a printing plate according to claim 19, wherein said imaging resin in liquid form contains 10 weight % or less of solvent.

27. A method for making a printing plate according to claim 19, wherein said blank printing plate is prepared by electrolytically polishing a surface of a plate member essentially made of aluminum, and anodizing the surface thereof.

28. A method for making a printing plate according to claim 19, wherein said blank printing plate is prepared by electrolytically polishing a surface of a plate member essentially made of aluminum, and electrochemically etching the surface thereof.

29. A method for making a printing plate according to claim 19, wherein said blank printing plate is prepared by laminating an aluminum layer on a surface of a plastic film, and electrochemically etching said aluminum layer.

30. A method for making a printing plate according to claim 19, wherein said porous layer is provided with a large number of pits, an average spacing between adjacent pits being smaller than a representative size of a dot or line of imaging resin deposited thereon.

31. A method for making a printing plate according to claim 19, wherein said porous layer is provided with a large number of pits, an average spacing between adjacent pits being 2 to 3 μm.